

Remarks

This Amendment is responsive to the Office Action of September 8, 2005. Re-examination and reconsideration of claims 1-27 is respectfully requested.

Summary of The Office Action

Claims 11-19 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter.

Claims 14, 17, 22 and 27 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

Claims 1-3, and 5-10 were rejected under 35 U.S.C. §102(b) as being anticipated by Garg (2002/0002577) (Garg).

Claims 4, and 11-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki (2002/0110014) (Araki).

Amendments

Claim 22 has been amended to address a grammatical issue.

The Claims Describe Statutory Subject Matter

35 U.S.C. §101

Claims 11-19 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Office Action recites that “an article of manufacture embodied in a computer-readable medium” is non-statutory subject matter when the computer-readable medium may take the form of “signals and carrier wave pulses”. While this type of 35 U.S.C. §101 rejection may have been valid before *In re Beauregard*, 53 F. 2d 1583, 35 USPQ 2d 1382 (Fed. Cir. 1995) and before *in re Lowry*, 32 F. 3d 1579, 32 USPQ 2d 1031 (Fed. Cir. 1994) it is clearly out of place and improper now. The teachings of these cases and the PTO response to the teachings were initially provided to examiners and practitioners alike in the 1996 Guidelines For Examining Computer Related Inventions. These guidelines were incorporated into the MPEP as MPEP §2106. This section provides guidance for how to examine computer-readable medium claims. MPEP §2106 distinguishes proper 35 U.S.C. §101 rejections for claims to forms of energy from improper 35 U.S.C. §101 rejections for claims to signals functioning as a computer-readable medium. MPEP §2106 reads, in pertinent parts:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, *per se*, and as such are non-statutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853). However, a signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature. See *O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980). ... A claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

The 1996 guidelines were supplemented with the 1996 PTO training materials related to examining computer related inventions. These training materials discuss with approval this claim in US patent 5,568,202 (Koo).

An electronic reference signal in a system for minimizing the effects of ghosts occurring during the transmission and reception of a television signal over a communications path, **wherein said reference signal is embodied in a processor readable memory**, is non-cyclic, has a substantially flat frequency response within the bandwidth of said communications path and has a plurality of substantially uniform amplitude peaks over a time interval, and wherein a replica

of said reference signal is transmitted as part of said television signal and is utilized by a decoder to derive coefficients which are used with at least one filter to remove said ghosts.

Thus, since at least 1996, computer-readable medium claims have been regarded favorably by the PTO and have been deemed to be statutory subject matter. The PTO is simply following the law as established by the Federal Circuit in *Beauregard* and *Lowry*. *Beauregard* and *Lowry* established that data structures and computer programs stored on floppy disks were statutory subject matter. The rationale behind the decisions was that a provider of infringing software should be liable as a direct infringer. If the data structure or computer program on the floppy disk was not statutory, then only the user of the software would be a direct infringer. The user could end up as an unwitting infringer while the provider, a knowing infringer, goes free. Thus, patent owners would be forced to sue unwitting infringers for direct infringement rather than proceeding against the actual infringer, the software provider. If the disk were not an infringing article of manufacture and the disk was provided from outside the United States then the provider might not have even been liable for contributory infringement since they would not have made, used, sold, or imported an infringing article. This is inequitable and thus the Federal Circuit acted, making programs and data structures embodied in computer-readable mediums statutory subject matter.

Since *Beauregard* and *Lowry*, propagated signals have largely replaced floppy disks for software distribution. Thus, the examination guidelines analogize with approval a propagated signal and a *Beauregard* claim (see 1996 guidelines, claim 13) (See also, *Koo*). The signal claim is directed to a manufactured transient phenomenon, like an electrical, optical, or acoustic signal that is more than just a perturbation. The manufactured transient phenomenon allows the transmission of computer executable instructions in the same way that the floppy disk of *Beauregard* and *Lowry* allow the transmission of computer executable instructions. Therefore, the claims are statutory subject matter, as determined by case law and PTO guidelines, and the 35 U.S.C. §101 rejection should be removed.

The Claims Do Not “Contradict” Each Other and Thus Do Not “Fail The Enablement Requirement”

35 U.S.C. §112, First Paragraph

Claims 14, 17, 22 and 27 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action recites that claims 14, 17, 22, and 27 “fail the enablement requirement because claims 17 and 27 contradict claims 14 and 22”. Specifically, the Office Action asserts that claims 17 and 27 recite “the at least first and second communication protocol include the same protocol” while claims 14 and 22 recite “a first communication protocol being a sector-level protocol and the second communication protocol being a file-level protocol”. This rejection simply cannot stand because it ignores the fact that claims 17 and 14 do not depend from each other, they depend from claim 11. Similarly, claims 22 and 27 do not depend from each other, they both depend from claim 20. A basic and fundamental principal of claim drafting holds that two dependent claims that depend from the same independent claim can recite different limitations for the same element.

Dependent claims stand alone from each other. What is recited in one dependent claim cannot “contradict” what is recited in another dependent claim if they do not depend from each other. Consider an independent claim for a car having an engine. One dependent claim may claim a car having a four cylinder engine. Another dependent claim may claim a car having a six cylinder engine. Another dependent claim may claim a car having a V8 engine. Another dependent claim may claim a car having a rotary engine. If these claims each depend from the independent claim and not from each other, then none of these claims “contradicts” any other claim because they stand alone from each other. Therefore, this completely improper rejection should be withdrawn.

The Claims Patentably Distinguish Over the References

35 U.S.C. §102

Claims 1-3, and 5-10 were rejected under 35 U.S.C. §102(b) as being anticipated by Garg. For a 35 U.S.C. §102 reference to anticipate a claim, the reference must teach every element of the claim. MPEP §2133 recites:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Here, Garg discloses a dynamic authorization system for determining whether a requester will be granted access to an item. The determination will be based on attributes of the requester and not on the state of the item. The determination does not concern coordinating access to an item between multiple requesters but rather controlling access to an item with respect to a single requester. Using the technique described in Garg, a memory in an image forming device could still become corrupted due to access requests from clients using un-coordinating protocols. Garg would simply decide whether a requester has adequate permissions to access an item, not whether the access is timely or would lead to a corruption due to a contention issue.

Garg is missing claimed elements. Specifically, Garg does not describe a storage access manager that coordinates access to a storage device where the accesses come from a plurality of client devices that communicate using at least one un-coordinating communication protocol. While Garg describes a resource manager that employs a dynamic authorization callback mechanism to limit access to objects, this is not the same as coordinating access from clients that use an un-coordinating communication protocol. Thus, Garg does not anticipate the claims.

35 U.S.C. §103

Claims 4, and 11-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. To establish a prima facie case of 35 U.S.C. §103 obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. MPEP 2143.01 Second, there must be a reasonable expectation of success. MPEP 2143.02 Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.03 Additionally, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). This requirement is intended to prevent unacceptable "hindsight reconstruction" where Applicant's invention is recreated from references using the Application as a blueprint.

Here, none of the first, second, or third criteria described in MPEP 2143.01 2143.02 and 2143.03 are satisfied since (1) there is no suggestion or motivation to modify or combine the reference(s), (2) there is no reasonable expectation of success, and (3) the combination of references does not teach or suggest all the claim limitations. None of the references, alone and/or in combination, teach a storage access manager that coordinates access to a storage device, where the accesses come from a plurality of client devices that communicate using at least one un-coordinating communication protocol. While Garg describes a resource manager that employs a dynamic authorization callback mechanism to limit access to objects, this is not the same as coordinating access from clients that use an un-coordinating communication protocol. While Araki describes a recording system where reading and/or writing can be done in parallel for a single requester, once again this is not the same as coordinating access from clients that use an un-coordinating communication protocol. Thus, Araki does not remedy the deficiencies of Garg. Therefore the combination of Garg and Araki does not establish a prima facie case for obviousness.

Garg discloses a dynamic authorization system for determining whether a requester will be granted access to an item. The determination will be based on attributes of the requester and not on the state of the item. The determination does not concern coordinating access to an item between multiple requesters but rather controlling access to an item with respect to a single requester. Using the technique described in Garg a memory in an image forming device could still become corrupted due to access requests from clients using un-coordinating protocols. Garg would simply decide whether a requester has adequate permissions to access an item, not whether the access is timely or would lead to a corruption due to a contention issue.

Araki discloses a recording system where data can be recorded into storage in parallel. When performing the parallel writing operation, input data may be converted into parallel data that is simultaneously written into a memory. This clearly has nothing to do with controlling access to a memory from clients using un-coordinating communication protocols. Therefore, even the combination of Garg and Araki does not teach each and every element claimed. Thus, a prima facie case for obviousness has not been established.

The Office Action recites that “it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the system of Garg to include a contention matrix configured to determine contention states for accessing the storage device because such

feature would have improved the performance of the system as taught by Araki.” However, neither Garg nor Araki describes a contention matrix. Garg describes a request having a field in which a rule may be placed. A rule is not a contention matrix. Araki provides several figures that are timing diagrams. A timing diagram is not a contention matrix. Thus, since neither reference includes a contention matrix, it could not possibly have been obvious to one of ordinary skill in the art to combine the references based on relationships to a contention matrix. For this additional reason a prima facie case of obviousness has not been established.

The Office Action recites that “since the technology for implementing a storage system with a contention matrix configured to determine contention states for accessing the storage device was well known as evidenced by Araki, an artisan would have been motivated to implement this feature in the system of Garg since this would have improved the performance of the system”. This is inaccurate because Araki is silent concerning a contention matrix configured to determine contention states. The items in Araki relied on by the Office Action are timing diagrams that show timing for parallel reads and/or writes. A timing diagram is not a contention matrix. Thus, no artisan would have been motivated to implement a contention matrix in Garg. Even if an artisan had been motivated to combine Araki with Garg, there still would not be a contention matrix in the resulting combination. For this additional reason a prima facie case of obviousness has not been established.

Contrary to assertions in the Office Action, there is nothing that would suggest the desirability of combining the references. While the Office Action asserts that combining Araki with Garg would improve Garg, this is inaccurate. Garg implements a dynamic callback authorization scheme for controlling access to a device. Araki implements parallel writes to a memory. The resulting combination would implement a dynamic callback authorization scheme for controlling access to a device that could do parallel writes. While an interesting combination, it improves neither Garg nor Araki since the two inventions are substantially unrelated. Changing the device to which Garg controls access does not change how Garg controls the access. Similarly, adding a level of security to Araki does not change how Araki does parallel writes. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). MPEP 2143.01 Here, nothing in the references or the Office Action suggests the desirability of the combination since the resulting

combination is simply two inventions stuck together. This falls well below the standard required to make a prima facie case for obviousness.

While the Office Action refers to an “artisan” and “one skilled in the art” the Office Action does not ascertain or comment on the skill level of that artisan. The MPEP requires that the Office Action ascertain and describe the level of ordinary skill so that objectivity can be maintained. MPEP §2141.03 reads:

The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry. *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718, 21 USPQ2d 1053, 1057 (Fed. Cir. 1991). The examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

Here the Office Action neither ascertains nor reports on the level of ordinary skill in the art. For this additional reason a prima facie case of obviousness has not been established.

Each claim will now be discussed individually.

Independent Claim 1

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 1 is directed to an image forming device that has a storage access manager that coordinates access from client devices communicating using an un-coordinating communication protocol. The reference is directed towards a general purpose computer that includes a resource manager that controls access to items based on privilege levels or attributes of a requester. The reference does not disclose an image forming device configured with a storage access manager that coordinates access to a storage device from client devices communicating using an un-coordinating protocol. More fundamentally, the reference does not disclose an image forming device configured with a storage access manager. In fact, the reference does not even disclose an image forming device.

In the reference, a requester sends a request to a resource manager on a general purpose computer. The resource manager decides whether to let the requester access a device based on information in the request. This is simple control. This is not coordination between devices and is certainly not coordination between devices using un-coordinating protocols. Multiple clients

using un-coordinating protocols could make requests to the dynamic callback authorization system disclosed in Garg, gain access to a storage device and then leave it in a corrupted state because the callback authorization system does not coordinate access.

Since claim 1 recites features not taught or suggested by the reference, claim 1 patentably distinguishes over the reference. Accordingly, dependent claims 2-3 and 5-10 also patentably distinguish over the reference and are in condition for allowance.

Claim 2

Claim 2 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 2 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 2 recites the access manager coordinating simultaneous access from a sector-level communication protocol and a file-level communication protocol. Since the reference does not disclose coordinating requests from any protocols, it follows that it also does not disclose coordinating between these two specific protocols. Also, since the reference does not disclose coordinating requests in any way, it follows that the reference does not disclose coordinating simultaneous requests. For this additional reason this claim is not anticipated.

Claim 3

Claim 3 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 3 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 3 recites the sector-level communication protocol including a universal serial bus (USB) protocol and the file-level communication protocol including a common internet file system protocol. While Garg describes a general purpose computer that has a USB port, having a USB port is not the same as receiving sector-level communication protocol requests for access to a storage device. Similarly, while Garg describes a general purpose computer that can communicate over the Internet, this is not the same as receiving a file-level communication protocol request for access to a storage device. For this additional reason this claim is not anticipated.

It is worth noting that when the Office Action discusses claim 11, the Office Action recites that “Garg does not specifically teach accessing the storage device from the at least first

communication protocol and the second communication protocol". It appears that the Office Action is internally inconsistent with respect to the teaching of Garg. For this additional reason - the admission by the Office Action -- this claim is not anticipated.

Claim 4

Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Garg and Araki are described above. Neither reference, alone and/or in combination, discloses a contention matrix. The Office Action refers to figures 6, 7, 15, and 16 in Araki as describing a contention matrix. These figures are timing diagrams. A timing diagram is not a contention matrix. Since neither reference discloses a contention matrix, let alone a contention matrix being used by an access manager to control access to a storage device in an image forming device being accessed by clients using an un-coordinating communication protocol, this claim is not obvious.

Claim 5

Claim 5 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 5 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 5 recites the device including a USB port for communicating to the storage device and a network communication port for communicating to the storage device. Garg discloses a USB port that connects input devices to processing unit 120, not to a storage device. For this additional reason this claim is not anticipated.

Claim 6

Claim 6 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 6 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 6 recites the device including a plurality of USB ports configured to provide access to the storage device. Garg discloses a USB port that connects input devices to processing unit 120, not to a storage device. For this additional reason this claim is not anticipated.

Claim 7

Claim 7 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 7 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 7 recites that the storage device includes logic to notify a client device whether an access request for the storage device is permissible. The paragraphs referenced in Garg disclose granting permission for a money transaction. This has nothing to do with whether a client device will be granted access to a storage device when the client device is communicating using an un-coordinating protocol. For this additional reason this claim is not anticipated.

Claim 8

Claim 8 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 8 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 8 recites a storage access manager being embodied as logic. Garg discloses a resource manager being implemented to manage objects and resources. It says nothing about how the resource manager is implemented. For this additional reason this claim is not anticipated.

Claim 9

Claim 9 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 9 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 9 recites the storage device being a memory card. Garg discloses a general purpose computer that may have memory cards. However, access to these memory cards is not controlled with respect to clients communicating via un-coordinating protocols. For this additional reason this claim is not anticipated.

Claim 10

Claim 10 was rejected under 35 U.S.C. §102(b) as being anticipated by Garg. Claim 10 depends from claim 1. Claim 1 has been shown to be not anticipated. Thus, this claim is similarly not anticipated. Additionally, claim 10 recites the storage access manager including means to coordinate the access to the storage device. Garg discloses a resource manager that

performs management functions for an application. This is not the same as coordinating access to a storage device from a plurality of devices that communicate with the storage device using at least one un-coordinating communication protocol. For this additional reason this claim is not anticipated.

Independent Claim 11

Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Neither of the references, alone and/or in combination, disclose elements claimed in this claim. Claim 11 recites first processor executable instructions for causing a processor to maintain a current access state for a storage device. The Office Action asserts that figure 2, figure 6, and paragraph 27 disclose this element. Careful review of these figures and paragraph, as well as careful review of the remainder of the references reveals no disclosure of any entity maintaining an access state for a storage device in an image forming device.

Claim 11 also recites second processor executable instructions for causing a processor to determine a contention status between the current access state and a received access request. The Office Action asserts that figure 6, paragraphs 3-4, and page 9, right column, lines 38-60 disclose these instructions. Careful review of these sections and the remainder of the references reveals no disclosure of any contention states, let alone disclosure of instructions for causing a processor to determine a contention status.

Claim 11 also recites a contention logic that defines rights for simultaneous access to a storage device. Once again, careful review of the cited sections and the remainder of the references reveals no contention logic.

Claim 11 also recites third processor executable instructions for causing a processor to determine whether a received access request is permissible based on a contention status. Since neither of the references disclose a contention logic or a contention status, it follows that neither of the references disclose instructions for causing a processor to make a decision based on a contention status.

For at least these reasons claim 11 is not obvious over the combination of references.

In the rejection of claim 11, the Office Action points to Garg disclosing an article of manufacture embodied in a computer-readable medium. Recall that the Office Action includes a

35 U.S.C. §101 rejection for carrier wave or signal based computer-readable mediums.

However, Garg defines a computer-readable medium as including a communication medium.

[0027] Garg provides that a communication medium “typically embodies computer readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave.” [0027] Thus, the reference upon which the Office Action relies to assert that claim 11 is obvious includes a definition of a computer-readable medium that is directly contrary to the 35 U.S.C. §101 rejection provided above. Thus once again the Office Action is found to be internally inconsistent. For this additional reason the rejection should be withdrawn.

Claim 12

Claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 12 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 12 recites a contention logic configured to coordinate simultaneous access to the storage device by clients using the first communication protocol and by clients using the second communication protocol. Neither reference discloses any communication protocols, thus it follows that neither reference discloses coordinating simultaneous access by clients using two communication protocols. Also, neither reference discloses coordinating access in any form, therefore it follows that neither reference discloses coordinating simultaneous access. For this additional reason this claim is not obvious.

Claim 13

Claim 13 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 13 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 13 recites that the contention logic is configured as a contention matrix that defines a plurality of access types to the storage device and whether simultaneous access is permissible between each other. The Office Action simply recites that the rationale of the rejection of claims 4 and 7 is incorporated. However, claim 13 includes a limitation not found in either claim 4 or claim 7. Specifically, claim 13 includes a contention logic being configured as a contention matrix that defines a plurality of access types to the storage device and whether simultaneous access is permissible between each other. Thus,

no rejection for this claim actually exists in the Office Action. For this reason, this claim should be allowed.

Additionally, as shown above, neither reference, alone and/or in combination, discloses a contention matrix. Thus, this claim is not obvious.

Claim 14

Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 14 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 14 recites the first communication protocol being a sector-level protocol and the second communication protocol being a file-level protocol. Neither reference discloses storage device access being controlled for clients communicating with communication protocols. Thus it follows that neither reference discloses these two specific types of protocols. This claim is not obvious for this additional reason.

Claim 15

Claim 15 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 15 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 15 recites the communication protocol including an un-coordinating protocol. Neither reference discloses storage device access being controlled for clients communicating with communication protocols. Thus it follows that neither reference discloses this specific type of protocol. This claim is not obvious for this additional reason.

Claim 16

Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 16 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 16 recites fourth processor executable instructions for causing a processor to notify a client when access to the storage device occurs by a second client. The Office Action refers to paragraphs 51 and 64. Paragraph 51 is silent concerning notifying even a first client, let alone a second client. Paragraph 64 describes receiving a request and says nothing about notifying a second device. Review of the remainder

of the references likewise provides no disclosure of the notification claimed in claim 16. For this additional reason this claim is not obvious.

Claim 17

Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 17 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 17 recites the first and second communication protocols including the same protocol. The Office Action refers to figure 3. Figure 3 discloses no protocols. Figure 3 illustrates several computers connected by a computer network. This falls well below the level required to disclose the claimed element. For this additional reason this claim is not obvious.

Claim 18

Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 18 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 18 recites fifth processor executable instructions for causing a processor to assign an identifier to each client requesting access. The Office Action refers to figure 4, paragraphs 21 and 36-37. These sections describe an ACE having an identifier field, not assigning an identifier to a client. Since the sections do not describe assigning an identifier to a client, it follows that they do not describe assigning identifiers to each client requesting access to a storage device, where the access is controlled and where the requests come from un-coordinating communication protocols. For this additional reason this claim is not obvious.

Claim 19

Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 19 depends from claim 11. Claim 11 has been shown to be non-obvious. Thus, this claim is similarly non-obvious. Additionally, claim 19 recites that the second processor executable instructions include storage access manager means for controlling access to the storage device. The Office Action refers to paragraphs 48-50. These paragraphs describe a resource manager that grants or denies permission to access an item based on privileges

associated with the requester. This granting or denying does not disclose the additional claimed element. For this additional reason this claim is not obvious.

Independent Claim 20

Claim 20 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. The Office Action simply recites that the rationale in the rejection of claims 2, 4, and 7 applies. Claims 2, 4 and 7 are directed towards an apparatus, an image forming device. Claim 20 is a method claim. The rationale applied to reject the cited system claims does not apply to a method claim. For this reason there is in effect no rejection on record for claim 20. For this reason this claim should be allowed.

Additionally, claim 20 recites elements not described in the references. Specifically, claim 20 recites providing access to the storage device in accordance with multiple communication protocols. None of the references describe a single protocol, let alone multiple protocols.

Claim 20 also recites coordinating multiple access requests based on contention rules that define permissibility of simultaneous requests. Since none of the references describe a contention rule, it follows that none of the references recite coordinating access requests based on contention rules.

Claim 20 also recites determining whether an access request is permissible based on the state of the storage device and a contention with a received access request. Garg describes a dynamic callback authorization system that makes decisions based on attributes in a request, not on the state of the device being accessed. Furthermore, neither reference describes contention resolution.

For these additional reasons this claim is not obvious.

Claim 21

Claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 21 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

The Office Action simply recites that the rationale in the rejection of claim 4 applies. Claim 4 is directed towards an apparatus, an image forming device. Claim 21 is a method claim.

The rationale applied to reject the cited system claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 21. For this reason this claim should be allowed.

Additionally, claim 21 recites elements not described in the references. Specifically, claim 21 recites defining contention rules based on types of access requests and a type of communication protocol associated with each request. Neither of the references, alone and/or in combination, disclose contention rules. Thus it follows that neither of the references disclose how those contention rules are defined. Similarly, neither of the references describe examining an access request with respect to a type of communication protocol associated with the access request. Thus the claim recites elements not disclosed in the references. For these reasons this claim is not obvious.

Claim 22

Claim 22 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 22 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

The Office Action simply recites that the rationale in the rejection of claim 3 applies. Claim 3 is directed towards an apparatus, an image forming device. Claim 22 is a method claim. The rationale applied to reject the cited system claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 22. For this reason this claim should be allowed.

Additionally, claim 22 recites elements not described in the references. Specifically, claim 22 recites providing access based on a sector-level communication protocol and a file-level communication protocol. Since neither reference discloses providing access based on any type of protocol it follows that neither reference discloses providing access based on these two specific protocols. For this additional reason claim 22 is not obvious.

Claim 23

Claim 23 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 23 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

The Office Action simply recites that the rationale in the rejection of claim 7 applies. Claim 7 is directed towards an apparatus, an image forming device. Claim 23 is a method claim. The rationale applied to reject the cited system claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 23. For this reason this claim should be allowed.

Additionally, claim 23 recites elements not described in the references. Specifically, claim 23 recites notifying a client requesting access to the storage device whether access is permissible. The references do not recite providing access to a storage device in accordance with multiple protocols. Therefore it follows that the references also do not recite notifying a client making a request through one of multiple protocols whether access is permissible. For this additional reason this claim is not obvious.

Claim 24

Claim 24 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 24 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

The Office Action simply recites that the rationale in the rejection of claim 18 applies. Claim 18 is directed towards an article of manufacture. Claim 24 is a method claim. The rationale applied to reject the cited article of manufacture claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 24. For this reason this claim should be allowed.

Claim 25

Claim 25 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 25 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

The Office Action simply recites that the rationale in the rejection of claim 7 applies. Claim 7 is directed towards an apparatus, an image forming device. Claim 25 is a method claim. The rationale applied to reject the cited system claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 25. For this reason this claim should be allowed.

Additionally, claim 25 recites elements not described in the references. Specifically, claim 25 recites notifying a first client when a second client accesses the storage device. This type of notification may be characteristic of contention resolution systems. It is not characteristic of access control systems like that described in Garg. Thus, it is not surprising that this type of notification is not described in either Garg or Araki. For this additional reason this claim is not obvious.

Claim 26

Claim 26 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 26 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

The Office Action simply recites that the rationale in the rejection of claim 15 applies. Claim 15 is directed towards an article of manufacture. Claim 26 is a method claim. The rationale applied to reject the cited article of manufacture claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 26. For this reason this claim should be allowed.

Additionally, claim 26 recites elements not described in the references. Specifically, claim 26 recites that the multiple communication protocols include at least one un-coordinating communication protocol. The references do not describe access requests being made through an un-coordinating communication protocol. For this additional reason this claim is not obvious.

Claim 27

Claim 27 was rejected under 35 U.S.C. §103(a) as being unpatentable over Garg in view of Araki. Claim 27 depends from claim 20. Claim 20 has been shown to be not obvious. Therefore this claim is similarly not obvious.

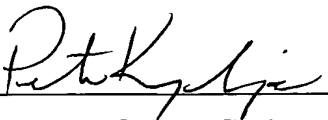
The Office Action simply recites that the rationale in the rejection of claim 17 applies. Claim 17 is directed towards an article of manufacture. Claim 27 is a method claim. The rationale applied to reject the cited article of manufacture claim does not apply to a method claim. For this reason there is in effect no rejection on record for claim 27. For this reason this claim should be allowed.

Conclusion

For the reasons set forth above, claims 1-27 patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

DEC. 7, 2005



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